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ABSTRACT

As part of the overall education plans for Fort Lincoln New Town (FLNT) an automated school cost model was developed. Chapter 1 overviews the FLNT model's features and sets its operational context, while chapter 2 discusses the model in detail. The appendices provide model inputs and cost calculations, names of approximately 500 inputs used in the model plus codes used for calculating equations, and provides the coded equations used to calculate the costs for each cost category, for investment costs and for operating costs. (For related documents see ED 047 171 through ED 047 188.) (Author/LS)

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GENERAL LEARNING CORPORATION
EDUCATIONAL SERVICES DIVISION

AA 000 680

FORT LINCOLN SCHOOL
COST MODEL AND FUNDING
FOR COMPREHENSIVE PLAN

Prepared by:

Bonnie Cohen
Sue Morris
Don Strope
Fred Talcott
Ann Yonkers

of

Resource Management Corporation

April 24, 1970

Educational Services Division
General Learning Corporation
5454 Wisconsin Avenue
Washington, D. C. 20015

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Report UR-119

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RESOURCE MANAGEMENT CORPORATION
7315 Wisconsin Avenue, Bethesda, Maryland 20014 Phone (301) 657-1810
401 Wilshire Blvd., Santa Monica, California 90401 Phone (213) 393-7231

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INTRODUCTION

As part of the overall education plans for Fort Lincoln New Town, RMC developed an automated school cost model. All told, our FLNT model can undertake the following tasks:

(1) The computation of the costs of education programs differentiated from each other by many educational inputs.

(2) Trade-off analyses that would permit school decision makers to display immediately the resource implications of specific program changes.

(3) The provision of the basis for cost-effectiveness analyses of various programs undertaken within the FLNT education system.

This chapter overviews the model's features and sets its operational context. Chapter 2 discusses the model in detail.

The design of the computer model was dictated by the FLNT comprehensive educational program, which will do away with arbitrary learning levels based on a child's chronological age. Instead the FLNT program is composed of learning levels based on a child's acquisition of clusters of skills. The cost model was therefore designed to reflect this concern with skill levels rather than grade levels. The basic format is shown in Table 1. The activities under which costs are organized are

- General Administration,
- Stages 1-7,
- Staff Development, and
- Community Activities.

Table 1

FORMAT OF THE MODEL

Object Class	Activity									Total
	General Administration	Stage 1	Stage 2	Stage 3-4	Stage 5	Stage 6	Stage 7	Staff Development	Community	
Personnel Level 1 Level 2 Level 3 Level 4 Level 5 Stipends (students)										
Office Equipment Capitalized Not Capitalized										
Classroom Equipment Capitalized Not Capitalized										
Office Supplies and Materials										
Classroom Supplies and Materials										
Communication and Printing Communications Printing										
Travel In-Town, Professional Out-of-Town, Professional In-Town, Students										
Consultants and Contracts Consultants Contracts										
Operation and Maintenance Personnel Supplies and Materials										
Lunch Program										
Total										

When the comprehensive plan is put into operation, the costs of operating the Fort Lincoln educational system will be arrayed by these activities. General administration, staff development, and community activities will reflect the total costs of providing these services within the system. In addition, the various stages will correspond to the costs of bringing children up to certain educational skill levels. For instance, in the comprehensive plan, Stage 1 might reflect the costs associated with a given number of children acquiring specified skills at the preschool level. Since the model is constructed to include all major cost categories under each of these activities, school planners will not inadvertently omit significant costs when they analyze alternative educational programs using the model.

An added feature of this model is that in addition to operating at the level of the entire school system, it is also designed to reflect the costs of operating one school--for instance a high school--or a number of schools associated with one target population or educational objective--for instance, all the high schools in Fort Lincoln New Town. In the first case, general administration, staff development, and community activities would reflect the costs associated with these activities within one school, while the various stages would represent either the costs of one learning activity, like reading, or a number of learning activities targeted at the same population within the school, like all vocational programs. In the latter case, a number of schools associated with one program objective, the model would reflect the sum cost of the various activities across high schools.

The model also facilitates alternative program analysis, that is, tradeoffs of resources or program designs for other program characteristics. School planners may quickly obtain the resource implications of such tradeoffs under whatever constraints they may wish to introduce. For example, Fort Lincoln administrators may wish to consider program changes while maintaining a constant overall cost per student; such a change might be decreasing the amount of equipment used in classes while increasing the number of staff in classes by utilizing more teacher aides. Thus, the model rapidly determines what is the tradeoff between equipment and teacher aides under the fixed cost per student constraint. The model can

rapidly answer any number of "What if?" questions in terms of resources and costs. However, these tradeoffs must ultimately be considered in light of educational effectiveness.

The basic output format of the model permits cost-effectiveness analysis of all the activities and experimental programs within the FLNT comprehensive education plan. Because total costs of all programs are collected by programs, it will be possible within the Fort Lincoln educational system to know the total cost of each program. Total cost will include, in addition to the cost of direct classroom activities like teacher time and classroom materials, any administrative costs associated with a program plus an assigned burden of indirect maintenance cost. Without including these often overlooked indirect costs, the complete cost of any educational program cannot be computed. Furthermore, by matching the costs of a program with evaluation data, cost-effectiveness analyses can be undertaken. Since costs are estimated by learning-skill-acquired, it will be possible to associate these costs with evaluation information to say, for instance, that it costs x dollars for each preschool pupil to acquire certain language skills. These analyses will permit comparisons between programs and will provide the basic data necessary to decisions on expanding, maintaining, reducing, or abandoning various experimental programs. Furthermore, if costs and evaluation information are collected by schools, it will be possible to compare the costs and performance of individual schools and to hold decision makers responsible for this performance.

An added feature of the FLNT model are the special outputs printed at the end of the computer output. Table 2 displays these special outputs with example data. These special items serve as decision-making guides to FLNT administrators by enabling them to immediately see key information, such as the operating cost per student, resulting from each program under consideration. For each analysis undertaken, whether by school, clusters of schools, or the entire FLNT system, these sections of the model supply the following information:

Table 2

SPECIAL OUTPUTS

YEARS OF OPERATION	SELECTED DATA VALUES
INVESTMENT	245.26
PERSONNEL ACQUISITION	0.00
PERSONNEL (STAFF TRAINING)	82.81
CLASSROOM EQUIPMENT--CAPITALIZED	75.56
OFFICE EQUIPMENT--CAPITALIZED	7.05
CLASSROOM SUPPLIES + MATERIALS	2.00
OFFICE SUPPLIES + MATERIALS	1.50
COMMUNICATIONS + PRINTING	0.35
FACILITY RENTAL (STAFF TRAINING)	2.00
IN-TOWN TRAVEL, PROFESSIONALS	0.52
OUT-OF-TOWN TRAVEL,PROFESSIONALS	2.66
CONSULTANTS	45.00
CONTRACTS	25.80
OPERATIONS + MAINTENANCE SUPPLIES	0.00
ANNUAL OPERATING	1025.17
PERSONNEL(LESS PERS.ACQUISITION)	492.11
PERSONNEL ACQUISITION	0.00
STIPENDS (STUDENTS)	
CLASSROOM EQUIPMENT--CAPITALIZED	1[illegible]1
OFFICE EQUIPMENT--CAPITALIZED	[illegible]21
CLASSROOM EQUIPMENT-NOT CAPITAL.	[illegible]5
OFFICE EQUIPMENT--NOT CAPITALIZED	10.65
CLASSROOM SUPPLIES + MATERIALS	127.65
OFFICE SUPPLIES + MATERIALS	4.70
COMMUNICATIONS + PRINTING	13.50
FACILITY RENTAL	0.00
IN-TOWN TRAVEL, PROFESSIONALS	2.95
IN-TOWN TRAVEL, STUDENTS	1.82
OUT-OF-TOWN TRAVEL, PROFESSIONALS	14.50
CONSULTANTS	20.44
CONTRACTS	117.00
OPERATIONS + MAINTENANCE	111.78
LUNCH PROGRAM	87.50
FOOD (COMMUNITY ACTIVITIES)	0.00
TOTAL NUMBER OF STUDENTS	700.00
STAGE 1	175.00
STAGE 2	235.00
STAGE 3-4	290.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
TOTAL NUMBER OF STAFF(LESS DAY CARE)	63.00
BY LEVEL	
LEVEL 1	0.00
LEVEL 2	0.00
LEVEL 3	17.00
LEVEL 4	16.00
LEVEL 5	30.00
BY ACTIVITY	
GENERAL ADMINISTRATION	6.00
STAGE 1	8.00
STAGE 2	10.00
STAGE 3-4	12.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STAFF TRAINING	1.00
COMMUNITY ACTIVITIES	26.00
TOTAL NO. OF PROFESS.(LESS DAY CARE)	33.00
GENERAL ADMINISTRATION	4.00
STAGE 1	4.00
STAGE 2	6.00
STAGE 3-4	8.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STAFF TRAINING	1.00
COMMUNITY ACTIVITIES	10.00

Table 2 (Continued)

STAFF RECEIVING ANNUAL STAFF TRAIN.	0.00
LEVEL 1	0.00
LEVEL 2	0.00
LEVEL 3	0.00
LEVEL 4	0.00
LEVEL 5	0.00
STUDENT-TOTAL STAFF(-COMM-ST)RATIO	19.44
STUDENT TO STAFF RATIOS BY STAGES	
AVERAGE FOR ALL STAGES	23.33
STAGE 1	21.88
STAGE 2	23.50
STAGE 3-4	24.17
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STUDENT-TOTAL PROF.(-COMM-ST)RATIO	31.82
STUDENT-PROF.STAFF RATIOS BY STAGE	
AVERAGE FOR ALL STAGES	38.89
STAGE 1	43.75
STAGE 2	39.17
STAGE 3-4	36.25
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
TOTAL INVEST.(LESS CUMM)/STUDENT	350.00
INVESTMENT COST BY STAGE PER STUDENT	
AVERAGE FOR ALL STAGES	109.00
STAGE 1	134.00
STAGE 2	113.00
STAGE 3-4	91.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
CLASS.EQP.+SUPP.INVEST.BY STAGE/STUD	
AVERAGE FOR ALL STAGES	107.00
STAGE 1	132.00
STAGE 2	111.00
STAGE 3-4	90.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STF TRN. INVEST. PER STAFF PER.TRNED	3782.50
TOT.OPERATING COST(-LUNCH)-CUMM)	675.41
TOT.OP.COST(-LUNCH)-COMM)/STUDENT	964.87
OP. COST(-LUNCH)BY STAGE/STUDENT	
AVERAGE FOR ALL STAGES	736.33
STAGE 1	811.27
STAGE 2	722.92
STAGE 3-4	701.97
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
ANN.CLASS.EQUIP.+SUPPL./STUDENT	
AVERAGE FOR ALL STAGES	203.95
STAGE 1	233.74
STAGE 2	203.05
STAGE 3-4	186.70
STAGE 5	
STAGE 6	
STAGE 7	
AN.STF.TRNING COST/STF.PER.TRNED.	

(1) Investment--The 13 cost categories under this category sum up the costs across educational activity. It is possible by looking at these items to see the total amount of the school system, a cluster of schools, one school, or one program.

(2) Annual Operating--These items sum up across activity and display the recurring annual operating cost of 19 cost categories.

(3) Total Number of Students--After the total number of students, the population is arrayed by stage so that it is possible to see at once the number of students, within the total, who are involved in each learning program.

(4) Total Number of Staff--In this item the total staff is first displayed by levels of salary and responsibility (see Chapter 2 for discussion of level). Since staff levels correspond to staff responsibility, a look at these numbers tells the decision maker the responsibility and seniority mix of the staff. Second, staff by activity is displayed to show staffing activity and the balance between direct educational activities and administration.

(5) Total Number of Professional Staff--This category subtracts out non-professionals (clerks, secretaries) and sums by activity. By assuming that the professionals are the educators, this item permits one to see the amount of staff directly involved in education.

(6) Staff Receiving Annual Staff Training--Since a major emphasis of the FLNT comprehensive plan is the encouragement of the staff to update their skills, this item permits one to see readily the number of people involved in staff training.

(7) Student: Total Staff--This divides the total number of students by the total number of staff to give a general picture.

(8) Student: Professional Staff Ratio by Stage--This divides the professional staff involved in each activity to the total number of students in each learning activity.

(9) Total Investment (less community programs)/Student--This divides the total investment cost by the total number of students to display the investment cost per student.

(10) Investment Cost by Stage per Student--This divides the cost at each learning stage by the students in that stage to get investment cost per student per stage.

(11) Classroom Equipment and Supplies Investment by Stage by Student--Assuming that classroom equipment and supplies are most directly related to education, this item separates these cost categories from total investment costs.

(12) Staff Training Investment per Staff Person Trained--This divides total staff training costs by the staff being trained to display the initial cost per staff person trained with FLNT.

(13) Total Operating Cost (lunch and community)--This is the annual operating cost.

(14) Total Operating Cost (lunch and community)/Student--This computes the traditional per pupil expenditure discussed later.

(15) Total Operating Cost (lunch) by Stage per Student--This displays the direct cost per child within each learning activity or program.

(16) Annual Classroom Equipment and Supplies/Student--This separates from operating costs those costs associated with educational materials and displays them by each student.

(17) Annual Staff Trainig Cost per Staff Person Trained--Displays by trainee the cost of annual staff training.

Effective program budgeting requires the participation of not only the budgeteers and business managers of Fort Lincoln, but also those directly involved in the daily operations of the school and the education program. As discussed, this program budget is organized in the activities of General Administration, Learning Stages 1-7, Staff Development, and Community Activities. Each year those persons responsible for resource allocation in each of these activities should assess the current year's operations and draw up specific budgets for the next year based on the programs and educational objectives they wish to accomplish. The budget for the following year should be specific and fairly exact. However, at the same time, tentative budgets for the following 4 years should be based on the specific requests for the following year.

These budgets should not speak simply of so many teachers at a particular salary but should be accompanied by brief descriptions of the programs involved, particularly their objectives. For example, a request for additional personnel should specify what subject areas they would be teaching and the number of students who would benefit. Accompanying the budget requests should be evaluation plans so that those requesting financial resources can be held responsible for producing a result. The specific results for each activity should be arranged in educational priorities.

At this point the requests for all activities should be grouped together to be presented and discussed as an integrated program. The priorities should be worked out between the activities and the final budget, including a five-year projection, drawn up by representatives of all the activities. The final budget for the entire facility should include program descriptions and objectives. A useful guideline during this process is that the ceiling figure for the school budget should be based on an estimate of the next year's per pupil operating costs for the D.C. School System as a whole, since in the real world of budget limitations all public school facilities in the city will be similarly constrained by the total funds available. Each year, specific programs should be enlarged, reduced, or kept at the same level based on an evaluation of the program's performance as compared to its cost and the relative costs and effectiveness of the other programs competing for the educational dollar. These general guidelines are discussed in relation to the First Facility in the Operating Plan (Volume II, Section 3).

MODEL DESCRIPTION

The figures in Table 3 are total cost estimates. To achieve the cost breakdown described below, detailed program specifications must be known to utilize the cost-estimating relationships in the automated cost model. Specific operating details must be expressed by educational planners--decisions such as number of teachers, number of learning centers, etc. Below is a description of the model and illustrations from the detailed First Facility plan. The full model printout in the appendix depicts the costs for the First Facility only.

MODEL STRUCTURE AND OUTPUTS

Figure 1 depicts the types of output from the model in the order they are printed (see Appendix A). First are the values of all the inputs used in costing the plan. (See Appendix B for a listing of all the inputs.) There are 465 possible inputs in the model and all the cost factors are consistent with D. C. Public School costs.

Next are investment costs by cost category for each activity, followed by operating costs by cost category for each activity. These are followed by the special outputs described in Chapter 1.

The rest of this section discusses the activities, the cost categories, and cost inputs.

School Activities

The model is currently constructed to cost the nine major activities shown in Table 4.

Table 4

SCHOOL ACTIVITIES

General Administration
Stage I - Instruction
Stage II - Instruction
Stage III-IV - Instruction
Stage V - Instruction
Stage VI - Instruction
Stage VII - Instruction
Staff Training
Community Activities

These phases of planning and implementation depend upon the completion of certain subarea housing developments and increases in resident population. In Table 3.1 and 3.2 the phases also have subarea designations indicating the particular housing developments to be finished in each phase. ~~Under Phase I, an overcrowding factor is added because some 540 children from the surrounding areas will be assigned to the Fort Lincoln school.~~ These phases, as shown, are not designed to correspond to specific years but rather encompass the First Facility development to the fully implemented educational plan--approximately the mid-seventies to 1980.

The number of students was estimated using the Logue Report, the GLC Definition Study, and the planned building schedules of Fort Lincoln. They are, of course, estimates and are adequate for current planning. They may be periodically updated as the development of Fort Lincoln progresses.

~~The per pupil dollar allotments are based upon those used in the D.C. School System, and include all operating costs incurred by the system, particularly personnel, office and classroom equipment, office and classroom supplies and materials, travel by both professional and students, contracts and consultants, and operations and maintenance. There is an approximately 8 percent a year increase in this allotment mainly to cover increasing prices and wages. The figures in Table 3 reflect this yearly increase taken to 1980.~~ (A)

The total costs ~~in Table 3~~ for the Comprehensive plan are planning costs; that is, they indicate the magnitude of resources required as the Fort Lincoln educational system is currently planned. As these plans become better defined and as the development of the Fort Lincoln community takes shape, more detailed costing by the full automated cost model can be performed to provide more refined costs. However, the ~~costs in Table 3~~ estimates can be confidently used as a reasonable indication of the total budget necessary to run the schools in the innovative manner dictated by the current educational plan.

(B)

THE COMPREHENSIVE PLAN

Costs for the comprehensive plan were estimated from an abbreviated version of the automated model used to cost the first facility. Since the educational plan will be implemented in ~~five~~ four phases to accommodate the growing student population of Fort Lincoln as each construction phase is completed, the total costs incurred will rise as the student population increases from phase to phase ~~and as the per pupil dollar allotment increases to allow for increased prices and wages. Table 3 is~~ Tables 3.1 and 3.2 are a summary of the costs of the comprehensive plan.

Table 3

COST SUMMARY OF COMPREHENSIVE PLAN

new table attached

Phase	Educational Level (Number of Pupils)		Per Pupil Allotment	Total Cost by Educational Level		Total
	Elementary	Secondary		Elementary	Secondary	
I						
Overcrowding	287	249	$1,597	$ 458,300	$ 397,700	$ 856,000
Subarea D	602	189		961,400	301,833	1,263,227
II						
Subarea C	1,986	614	1,725	3,425,800	1,059,200	4,485,000
III						
Subarea B	1,546	475	1,863	2,880,200	884,900	3,765,100
IV						
Subarea A	1,895	581	2,012	3,812,700	1,169,000	4,981,700
V						
Subarea E	1,490	459	2,173	3,237,800	997,400	4,235,200

2

THE COMPREHENSIVE PLAN

MODEL DESCRIPTION

The figures in Table 3.4 on page 3-20 of Report No. 5, The Comprehensive Plan, show total cost estimates. To achieve the cost breakdown described below, detailed program specifications must be known to utilize the cost-estimating relationships in the automated cost model. Specific operating details must be expressed by educational planners--decisions such as number of teachers, number of learning centers, etc. Below is a description of the model and illustrations from the detailed First Facility plan. The full model printout in the appendix depicts the costs for the First Facility only.

MODEL STRUCTURE AND OUTPUTS

Figure 1 depicts the types of output from the model in the order they are printed (see Appendix A). First are the values of all the inputs used in costing the plan. (See Appendix B for a listing of all the inputs.) There are 465 possible inputs in the model and all the cost factors are consistent with D. C. Public School costs.

Next are investment costs by cost category for each activity, followed by operating costs by cost category for each activity. These are followed by the special outputs described in Chapter 1.

The rest of this section discussed the activities, the cost categories, and cost inputs.

School Activities

The model is currently constructed to cost the nine major activities shown in Table 3.

Table 3

SCHOOL ACTIVITIES

General Administration
Stage I - Instruction
Stage II - Instruction
Stage III-IV - Instruction
Stage V - Instruction
Stage VI - Instruction
Stage VII - Instruction
Staff Training
Community Activities

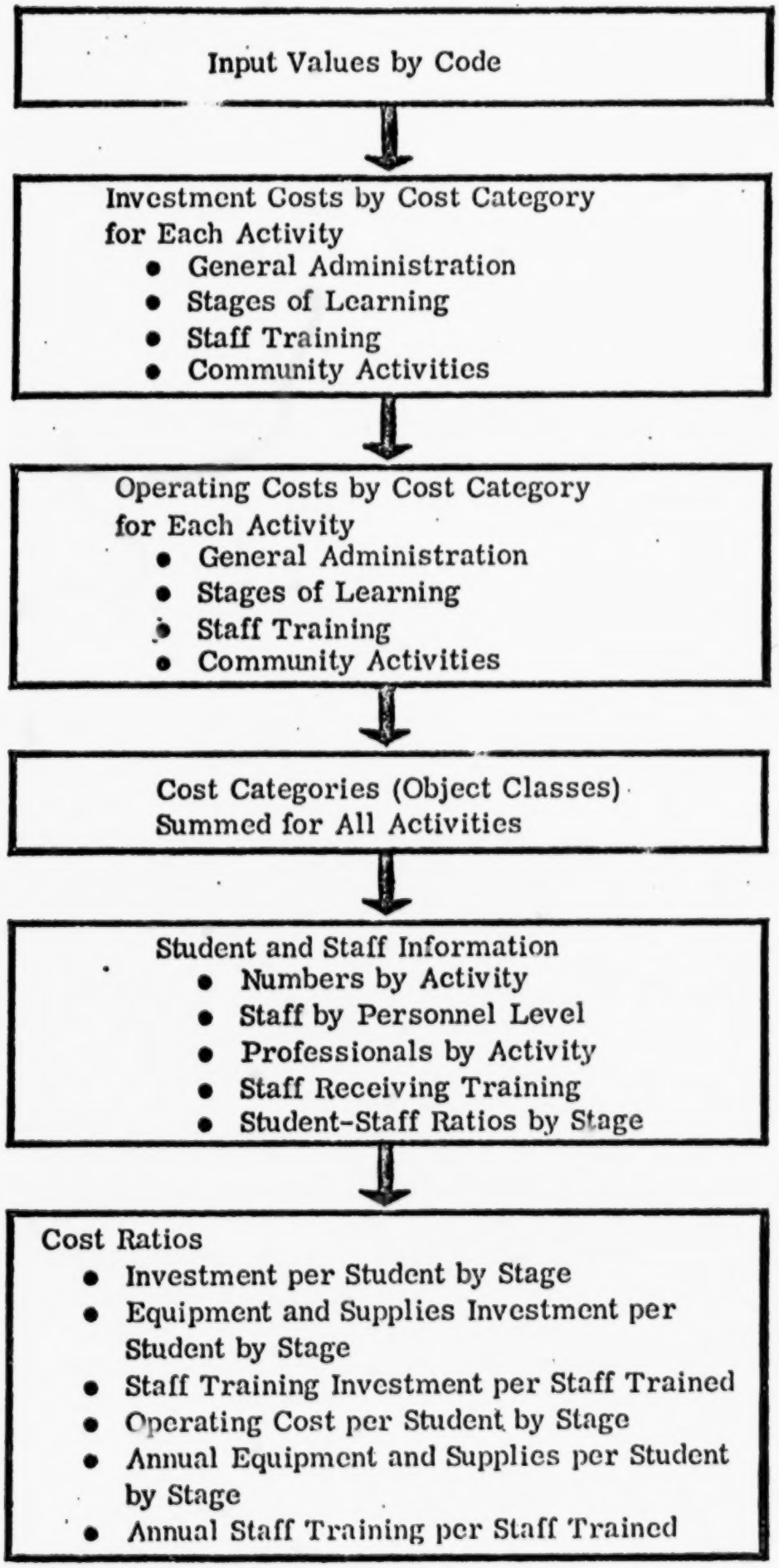
Input Values by Code
Investment Costs by Cost Category for Each Activity
• General Administration
• Stages of Learning
• Staff Training
• Community Activities
Operating Costs by Cost Category for Each Activity
• General Administration
• Stages of Learning
• Staff Training
• Community Activities
Cost Categories (Object Classes) Summed for All Activities
Student and Staff Information
• Numbers by Activity
• Staff by Personnel Level
• Professionals by Activity
• Staff Receiving Training
• Student-Staff Ratios by Stage
Cost Ratios
• Investment per Student by Stage
• Equipment and Supplies Investment per Student by Stage
• Staff Training Investment per Staff Trained
• Operating Cost per Student by Stage
• Annual Equipment and Supplies per Student by Stage
• Annual Staff Training per Staff Trained

Figure 1: MODEL OUTPUT STRUCTURE

Under General Administration are all the costs associated with administering the overall FLNT educational program. The administrative costs associated with a specific learning stage are found under that learning stage. In other words, General Administration refers to the administrative activities that support all stages. Under the stages of instruction (as defined in the Education Plan) appear the total costs of meeting the educational objectives of these stages. They include pre-kindergarten through senior high school. For instance, under Stage I are all the costs associated with the education of pre-schoolers including administration, teaching, food services, and operations and maintenance, etc. This model breakdown facilitates budgetary decision making on the basis of overall skill levels achieved by studies instead of simply money spent for so many teachers or so many library books. Similarly, under Staff Development are displayed all the costs associated with the continuous education of all the staff and under Community Activities are displayed all the costs associated with using school facilities in educational and cultural activities for the total community.

COST CATEGORIES

The cost categories described here are consistent with the D. C. Public School Budget structure. The two classes of costs are investment and operating. The investment costs are one-time costs incurred in establishing the Fort Lincoln schools. Facility costs were purposely excluded from the model since they are being independently estimated. Annual operating costs are those costs that recur each year.

The above school activities are costed, as stated, by using object classes--a detailed breakdown of component costs. With the use of object classes, it is possible to get a complete picture of resources applied to each activity and to obtain total costs by activity, i.e., total capitalized equipment cost, total supplies and materials cost, total operating and maintenance costs, etc. Below is a full list of the object classes used in this version of the model.

COST CATEGORIES[1]

INVESTMENT COSTS

Personnel Acquisition
Personnel (Staff Training)
Classroom Equipment - Capitalized
Office Equipment - Capitalized
Classroom Supplies and Materials
Office Supplies and Materials
Communication and Printing
Facility Rental (Staff Training)
In-town Travel, Professionals
Out-of-torn Travel, Professionals
Consultants
Contracts
Operations and Maintenance Supplies

ANNUAL OPERATING COSTS

Personnel
Personnel Acquisition
Classroom Equipment - Capitalized
Office Equipment - Capitalized
Classroom Equipment - Not Capitalized
Office Equipment - Not Capitalized
Classroom Supplies and Materials
Office Supplies and Materials
Communications and Printing
Facility Rental
In-town Travel, Professionals
Out-of-town Travel, Professionals
Consultants
Contracts
Operations and Maintenance
Lunch Program
Food (Community Activities)

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1. Although facility construction costs were not included in the Fort Lincoln application of this model, this category of costs could be easily added.

Personnel

Because of the personnel strcuture planned for the school, the budget model was developed with five personnel levels, which approximate the salary levels of the D. C. School System. They are as follows:

- Level I: This includes those who hold positions ranging from that of elementary school principal to that of assistant superintendent. The salary-plus benefits range from $15,500-$19,300. In the computation, the average figure of $17,800 was used as an annual salary figure.
- Level II: Second highest level. In the D. C. School System, this level of personnel includes assistant principals, supervising directors, or principals. The total compensation ranges from $14,300-$15,500. In the computation, the average annual salary figure of $8,800 was used.
- Level III: This level in the D. C. School System would include master teachers whose total compensation ranges from $10,700-$14,300. In the computation, the average figure of $12,700 was used.
- Level IV: This level in the D. C. School System would include base teachers, librarians, experienced secretaries, and head custodians and engineers. The total compensation ranges from $7,000-$10,700. In the computation, the average figure of $8,800 was used.
- Level V: Lowest level. This level in the D. C. School System includes teacher aides, clerks, and custodian assistans whose compensation ranges from $5,400-$6,000. In the calculation, the average figure of $5,860 was used.
- Students: Some students will be employed part time in the facility at $1.50/hour to provide instructional support (see Education Plan, Volume I).

Many people on the faculty may be employed part time. For ease in computation, their positions are translated into full-time equivalents. For example, three people each working one-third time equal one full-time person. The use of an average compensation figure at this time provides sufficient funds for salary and benefits. After operation is under way and individuals of different skills are hired at specific salary levels, these figures will represent actual salaries plus benefits.

The above salaries are based on the 1970 salary scale of the District of Columbia School Board. These salaries will obviously increase from year to year so that more money must be allocated to cover personnel costs. But it must be remembered that this salary breakdown was used to establish the level of responsibility of the people hired. These levels of responsibility will hold true even when the salaries increase.

In addition to the full-time administrative and instructional staff, the personnel cost model includes children and community participants who will receive stipends and daily wages for part-time work in the school.

The personnel object class includes the capacity to compute a personnel acquisition cost to ensure funds for new teacher recruitment every year. This item appears only in the annual operating budget. First-year experience will allow those concerned to estimate recruitment costs per type of person recruited and compute the funds needed in succeeding years.

Capitalized and Noncapitalized Equipment

Capitalized and Noncapitalized Classroom and Office Equipment are categories that always require additional explanation in financial accounting of school systems. The District of Columbia School Board defines equipment as:

> "A material item of a non-expendable nature such as a built-in facility, a movable or fixed unit of furniture, an instrument or apparatus, a machine, an instructional skill-training device, or a set of small articles, whose parts are replaceable or repairable, the whole retaining its identity and utility over a period of time which is characteristic of and definable for items of this class."

Once an item is classified as equipment, it is again classified as either capitalized or noncapitalized equipment. The D.C. Board defines capitalized equipment as that being purchased for the first time and noncapitalized equipment as replacements. For planning, howver, we have slightly changed this definition. The basic equipment definition is the same, but capitalized equipment, for our purposes, includes that equipment purchased for $100 or more and having a useful life of longer than a year, while noncapitalized equipment is that which costs less than $100 and lasts about one year.

as the replacements. For planning, however, we have slightly changed this definition. The basic equipment definition is the same, but capitalized equipment, for our purposes, includes that equipment purchased for $100 or more and having a useful life of longer than a year, while noncapitalized equipment is that which costs less than $100 and lasts about one year.

We have included under Equipment the same items the D.C. School System includes--typewriters, movie projectors, Language Masters, etc.--with two exceptions. Textbooks and library books are included in the equipment category according to the D.C. School Board Office. For the purposes of our planning effort, texts and other books have been included under recurring and nonrecurring supplies. A discussion of this point appears below. Second, school furniture (desks, chairs, etc.) is classified under equipment by D.C.--but for our purposes these costs appear under the capital outlay budget available from the Special Projects Division.

It should be noted that because the Fort Lincoln Plan includes some investment and operating costs, capitalized office and noncapitalized and classroom equipment allotments have been included in the investment and operating phases. The money alloted in the operating budget for capitalized equipment is designed to be sufficient for the updating and replacement of the original equipment.

Supplies and Materials

Classroom and office supplies and materials categories also need some clarification. The D.C. Board of Education defines supply as a material item of an expendable nature that is consumed, worn out, or deteriorated in use--or one that loses its identity through fabrication or incorporation into a different or more complex unit or substance. For our planning purposes, we have divided this category into two subgroups:

- recurring supplies, those that must be order each year; and
- nonrecurring supplies, those that are necessary to the establishment of the facility and may last a few school years.

All the supplies and materials to be costed for Fort Lincoln were determined by the GLC planners with the exception of the "usual" office supplies estimate, which was put together by the Resource Management Corporation. Here are some examples of our supply classifications:

- Classroom Supplies and Materials
  - Recurring (for the purposes of replacement and updating)
    - Movie Film
    - Polaroid Film
    - Tools
    - Subscriptions and Periodicals
    - Workbooks
    - Paperback Books
    - Textbooks
    - Library Books
  - Nonrecurring (the initial substantial purchases)
    - Films
    - Cassettes
    - Records
    - Overhead Transparancies
    - Tools
    - Aquarium
    - Encyclopedias
    - Reference Books

It will be noted that textbooks, library books, and workbooks are included under supply and materials instead of equipment as the D.C. Board classifies them.

- Office Supplies and Materials
  - Recurring
    - Paper
    - Carbon Paper
    - Paper Clips
    - Pencils
  - Nonrecurring
    - Staple Guns
    - Desk Files
    - Hole Punch

Communications and Printing and Reproduction

This object class includes costs incurred in the publication of reports, directories, manuals, and visitor information in addition to the usual printing and reproduction done at the school facility. The Communications portion includes allotments for postage, telephone, and telegraph services.

Travel

This object class is broken down into three components:

- Professional in-town travel, which includes all administrators' and teachers' travel in the D.C. area. The allotment is based on a figure of $.10 a mile.
- Student in-town travel includes the cost of student field trips to museums and other points of interest in the Washington area.
- Professional out-of-town travel includes funds for trips to conventions, symposia, or observations of other schools for the administrators and some instructional staff. It is sufficient to permit one out-of-town trip per full-time staff member.

For the first year, in this case as in others, the amount of travel was estimated. These figures can be revised in light of actual costs incurred the first year.

Consultants and Contracts

The dollar allotment for consultants is based on the figure of $75 per day and permits the use of both in-town and out-of-town consultants. The amount of time needed was estimated by the educational planners and can be revised after the first-year's experience.

Allotments for contracts include money to be spent on objective outside consultants hired to make thorough evaluations of the school and all its programs.

Operations and Maintenance

After much consultation with the D.C. Board of Education and other informed sources, the operations and maintenance allotment was put at 14 percent of the total budget. This percentage allotment takes into consideration personnel costs, supplies, and materials, as well as the extended hours of facility operation (see Education Plan for hours per week that the school is open).

Lunch Program

The District of Columbia schools provide a hot lunch to all pupils at a cost of about $.50 per pupil. This is the figure used to compute the total lunch program cost for Fort Lincoln First Facility. The dollar allotment is included in the total budget but not in the computation of the per pupil expenditure.

Other Model Outputs

At the end of the cost category output (Appendix A), further important output will be provided. In this output, the cost are first aggregated by cost category across all activities. For example, the cost of personnel acquisition is summed for general administration, the stages of instruction, staff training, and community activities. Next, student and staff data are given--for example, the total number of students by stage of instruction, the number of staff by level and by activity, and the number of staff receiving annual training. This is followed by various student-staff ratios and the various costs per student figures and staff training costs per staff person trained. These special outputs have been discussed in Chapter 1.

MODEL INPUTS AND COST CALCULATIONS

The model contains cost-estimating equations for each cost category. The types of data inputs used in those equations are currently based on the data used in the D.C. public schools. For example, the annual salary and benefits of staff personnel are estimated by the following general equation:

$$\frac{\text{number of personnel}}{\text{at a given level}} \times \frac{\text{annual salary}}{\text{benefits at that level}}$$

In the model for Level I personnel in Stage I Instruction, the coded equations looks as follows:

S1L1 x L1AS

Appendix B provides the names of all the nearly 500 inputs used in the model. In addition, Appendix B gives the codes used for each input in the calculating equations.

Appendix C provides the coded equations used to calculate the costs for each cost category, first for investment costs and then for operating costs.

APPENDIX A

INPUT DATA, ALTERNATIVE MIN1 FORT LINCOLN MINIMUM CASE

L1AS	17800.000	L2AS	15000.000	L3AS	12700.000	L4AS	8800.000	L5AS	5860.000
L4HW	6.660	L5HW	6.660	SDW	8800.000	ACL1	300.000	ACL2	240.000
ACL3	240.000	ACL4	125.000	ACL5	125.000	L1TR	0.000	L2TR	0.000
L3TR	0.000	L4TR	0.000	L5TR	0.000	PITTC	0.100	SITTC	0.500
POTTC	100.000	POTTD	3.000	POTTDC	16.000	DERCF	0.100	CERCF	0.200
ACD	750.000	CDC	75.000	CTC	75.000	CTD	2.000	CTDC	16.000
DMPF	0.070	DMSF	0.070	ALCS	125.000	GL1	0.000	GL2	0.000
GL3	4.000	GL4A	0.000	GL4B	0.000	GL5	2.000	DUM1	0.000
GIFDEC	6000.000	GIDES4	0.000	GIFDSM	0.000	GIDSS4	0.000	GICP	0.000
GCI	0.000	GCID	0.000	GITC	0.000	GCONI	0.000	GIDMS	0.000
GD	2.000	GADES4	1500.000	GADSS4	400.000	GAPR	1750.000	GFR	0.000
GPAITF	0.500	GPAIT	900.000	GPADTF	0.500	GPADT	5.000	GCA	0.000
GCAD	0.000	GATC	0.000	GCONA	40000.000	S1S	175.000	S1L1	0.000
S1L2	0.000	S1L3	2.000	S1L4A	2.000	S1L4B	0.000	S1L5	4.000
DUM2	0.000	S1IFCC	23145.000	S1ICCS	0.000	S1IFOC	300.000	S1IOS4	50.000
S1IFCS	0.000	S1ICSS	0.000	S1IFOS	0.000	S1IOSS	0.000	S1ICP	0.000
S1CI	0.000	S1CID	0.000	S1ITC	0.000	S1CONI	0.000	S1IOMS	0.000
S1D	1.000	S1AFC	1250.000	S1ACS	0.000	S1AOS4	50.000	S1AFCS	17525.000
S1ACSS	100.000	S1AOSS	300.000	S1APR	750.000	S1FR	0.000	S1PITF	1.000
S1PAIT	100.000	S1SITF	0.350	S1SAIT	10.000	S1POTF	1.000	S1PAOT	1.000
S1CA	18.000	S1CAD	1.000	S1ATC	0.500	S1CONA	8500.000	S1SLF	1.000
S2S	235.000	S2L1	0.000	S2L2	0.000	S2L3	3.000	S2L4A	3.000
S2L4B	0.000	S2L5	4.000	S2IFCC	26255.000	S2ICCS	0.000	S2IFOC	300.000
S2IOS4	50.000	S2IFCS	0.000	S2ICSS	0.000	S2IFOS	0.000	S2IOSS	0.000
S2ICP	0.000	S2CI	0.000	S2CID	0.000	S2ITC	0.000	S2CONI	0.000
S2IOMS	0.000	S2D	1.000	S2AFC	1000.000	S2ACS	0.000	S2AOS4	50.000
S2AFCS	17965.000	S2ACSS	100.000	S2AOSS	300.000	S2APR	750.000	S2FR	0.000
S2PITF	1.000	S2PAIT	100.000	S2SITF	1.000	S2SAIT	3.000	S2POTF	1.000
S2PAOT	1.000	S2CA	18.000	S2CAD	1.000	S2ATC	0.500	S2CONA	5500.000
S2SLF	1.000	S34S	290.000	S34L1	0.000	S34L2	0.000	S34L3	4.000
S34L4A	4.000	S34L4B	0.000	S34L5	4.000	S34IEC	26160.000	S34ISC	0.000
S34IED	300.000	S34ISD	50.000	S34IC	0.000	S34ICS	0.000	S34ID	0.000
S34IOS	0.000	S34ICP	0.000	S34CI	0.000	S34CID	0.000	S34ITC	0.000
S34CNI	0.000	S34IMS	0.000	S34D	1.000	S34AFC	1000.000	S34ACS	0.000
S34OS4	50.000	S34AC	18910.000	S34CSS	100.000	S34OSS	300.000	S34APR	750.000
S34FR	0.000	S34PIF	1.000	S34PIT	100.000	S34SIF	1.000	S34SIT	8.000
S34POF	1.000	S34POT	1.000	S34CA	18.000	S34CAD	1.000	S34ATC	0.500
S34CNA	6000.000	S34SLF	1.000	S5S	0.000	S5L1	0.000	S5L2	0.000
S5L3	0.000	S5L4A	0.000	S5L4B	0.000	S5L5	0.000	S5IFCC	0.000
S5ICCS	0.000	S5IFOC	0.000	S5IOS4	0.000	S5IFCS	0.000	S5ICSS	0.000
S5IFOS	0.000	S5IOSS	0.000	S5ICP	0.000	S5CI	0.000	S5CID	0.000
S5ITC	0.000	S5CONI	0.000	S5IOMS	0.000	S5D	0.000	S5AFC	0.000
S5ACS	0.000	S5AOS4	0.000	S5AFCS	0.000	S5ACSS	0.000	S5AOSS	0.000
S5APR	0.000	S5FR	0.000	S5PITF	0.000	S5PAIT	0.000	S5SITF	0.000
S5SAIT	0.000	S5POTF	0.000	S5PAOT	0.000	S5CA	0.000	S5CAD	0.000
S5ATC	0.000	S5CONA	0.000	S5SLF	0.000	S6S	0.000	S6L1	0.000
S6L2	0.000	S6L3	0.000	S6L4A	0.000	S6L4B	0.000	S6L5	0.000
S6IFCC	0.000	S6ICCS	0.000	S6IFOC	0.000	S6IOS4	0.000	S6IFCS	0.000
S6ICSS	0.000	S6IFOS	0.000	S6IOSS	0.000	S6ICP	0.000	S6CI	0.000
S6CID	0.000	S6ITC	0.000	S6CONI	0.000	S6IOMS	0.000	S6D	0.000
S6AFC	0.000	S6ACS	0.000	S6AOS4	0.000	S6AFCS	0.000	S6ACSS	0.000
S6AOSS	0.000	S6APR	0.000	S6FR	0.000	S6PITF	0.000	S6PAIT	0.000
S6SITF	0.000	S6SAIT	0.000	S6POTF	0.000	S6PAOT	0.000	S6CA	0.000
S6CAD	0.000	S6ATC	0.000	S6CONA	0.000	S6SLF	0.000	S7S	0.000
S7L1	0.000	S7L2	0.000	S7L3	0.000	S7L4A	0.000	S7L4B	0.000
S7L5	0.000	S7IFCC	0.000	S7ICCS	0.000	S7IFOC	0.000	S7IOS4	0.000
S7IFCS	0.000	S7ICSS	0.000	S7IFOS	0.000	S7IOSS	0.000	S7ICP	0.000

S7CI	0.000	S7CID	0.000	S7ITC	0.000	S7CONI	0.000	S7IOMS	0.000
S7O	0.000	S7AFC	0.000	S7ACS	0.000	S7AOS4	0.000	S7AFCS	0.000
S7ACSS	0.000	DUM3	0.000	DUM4	0.000	DUM5	0.000	DUM6	0.000
S7AOSS	0.000	S7APR	0.000	S7FR	0.000	S7PITF	0.000	S7PAIT	0.000
S7SITF	0.000	S7SAIT	0.000	S7POTF	0.000	S7PAOT	0.000	S7CA	0.000
S7CAD	0.000	S7ATC	0.000	S7CONA	0.000	S7SLF	0.000	STL1	0.000
STL2	0.000	STL3	1.000	STL4A	0.000	STL4B	0.000	STL5	0.000
DUM8	0.000	STSA	35.000	STIC	20.000	STICW	10.000	STIWKS	8.000
STWL1T	0.000	STWL2T	0.000	STWL3T	0.000	STWL4T	0.000	STWL5T	0.000
STIWL1	0.000	STIWL2	0.000	STIWL3	11.000	STIHL4	320.000	STIWL5	8.000
STSAH	60.000	STWC	3.000	STIHWC	15.000	STIDCP	1.000	STSAHR	1.500
STIRHC	1.000	STIRCP	25.000	STIFL1	0.000	STIFL2	0.000	STIFL3	1.070
STIFL4	1.330	STIFL5	1.210	STIFCC	0.000	STICCT	0.000	STIFOC	0.000
STIOS4	0.000	STIFCS	2000.000	STICST	0.000	STIFOS	1500.000	STIOSS	0.000
STICP	350.000	STFRWK	250.000	STIITF	1.000	STIITT	5200.000	STIOTF	0.400
STIOTT	1.000	STITFT	0.000	STIIT	0.000	STITFS	0.000	STCI	100.000
STCID	6.000	STITC	0.000	STCONI	25800.000	DUM9	0.000	DUM10	0.000
STIOMS	0.000	STADL1	0.000	STADL2	0.000	STADL3	0.000	STADL4	0.000
STADL5	0.000	STAFL1	0.000	STAFL2	0.000	STAFL3	0.000	STAFL4	0.000
STAFL5	0.000	STO	0.000	STAFC	0.000	STACT	0.000	STAOS4	0.000
STACST	0.000	STAOST	0.000	STAPR	0.000	STFR	0.000	STAITF	0.000
STAITT	0.000	STAOTF	0.000	STAOTT	0.000	STCA	0.000	STCAD	0.000
STATC	0.000	STCONA	7000.000	STDCC	0.000	STDCL2	0.000	STDCL3	0.000
STDC4A	0.000	STDC4B	0.000	STDCL5	0.000	STDCCN	0.000	STDCDW	0.000
STDCCW	0.000	STDCFE	0.000	STDCE	0.000	STDCRW	0.000	STDCFO	0.000
STDCOW	0.000	CS	1.000	CL1	0.000	CL2	0.000	DUM11	0.000
CL3	3.000	CL4A	7.000	CL4B	0.000	CL5	16.000	DUM12	0.000
CIFCC	0.000	CICCS	0.000	CIFOC	0.000	CIOS4	0.000	CIFCS	0.000
CICSS	0.000	CIFOS	0.000	CIOSS	0.000	CICP	0.000	CCI	0.000
CCID	0.000	CITC	0.000	CCONI	0.000	CIOMS	0.000	CO	1.000
CAFC	0.000	CACS	0.000	CAOS4	7500.000	CACSS	3250.000	CAOSS4	3000.000
CAPR	5000.000	CFR	0.000	CPAITF	0.900	CPAIT	2880.000	CSAITF	0.000
CSAIT	0.000	CPAOTF	1.000	CPAOT	7.000	CCA	28.000	CCAD	5.000
CATC	1.000	CCONA	50000.000	CFOOD	0.000	NWIOY	52.000	S1SPD	4050.000
S2SPD	2700.000	S34SPD	2700.000	CSPD	18000.000	CFL3	-22040.000	CFL4	-43700.000
CFL5	-10900.000	COECFC	1500.000	000000	0.000	000000	0.000	000000	0.000

FORT LINCOLN SCHOOL COST MODEL--VERSION 2 UP-DATED 10/ 2/69

FORT LINCOLN MINIMUM CASE

ALTERNATIVE MIN1

COST CATEGORIES	DOLLARS IN THOUSANDS		
INVESTMENT			
GENERAL ADMINISTRATION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	-----	0.00	
OFFICE EQUIPMENT--CAPITALIZED	-----	6.00	
OFFICE SUPPLIES AND MATERIALS	-----	0.00	
COMMUNICATIONS AND PRINTING	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES	-----	0.00	
		-----	6.00
STAGE 1 INSTRUCTION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	-----	0.00	
EQUIPMENT--CAPIT. AND NOT CAPITAL.			
CLASSROOM	23.15		
OFFICE	0.35		
	-----	23.50	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS AND PRINTING	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES	-----	0.00	

		-----	23.50
STAGE 2 INSTRUCTION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL.5	0.00		
	-----	0.00	
EQUIPMENT--CAPIT. AND NOT CAPITAL.			
CLASSROOM	26.26		
OFFICE	0.35		
	-----	26.61	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS AND PRINTING			
	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES			
	-----	0.00	
		-----	26.61
STAGE 3-4 INSTRUCTION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	-----	0.00	
EQUIPMENT--CAPIT. AND NOT CAPITAL.			
CLASSROOM	26.16		
OFFICE	0.35		
	-----	26.51	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS AND PRINTING			
	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES			
	-----	0.00	
		-----	26.51
STAGE 5 INSTRUCTION			
PERSONNEL ACQUISITION			

LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	-----	0.00	
EQUIPMENT--CAPIT. AND NOT CAPITAL.			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS AND PRINTING			
	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES			
	-----	0.00	
		-----	0.00
STAGE 6 INSTRUCTION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	-----	0.00	
EQUIPMENT--CAPIT. AND NOT CAPITAL.			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS AND PRINTING			
	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	-----	0.00	
OPERATIONS AND MAINTENANCE SUPPLIES			
	-----	0.00	
		-----	0.00
STAGE 7 INSTRUCTION			
PERSONNEL ACQUISITION			
LEVEL 1	0.00		
LEVEL 2	0.00		

LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
EQUIPMENT--CAPIT. AND NOT CAPITAL.		0.00	
CLASSROOM	0.00		
OFFICE	0.00		
SUPPLIES AND MATERIALS		0.00	
CLASSROOM	0.00		
OFFICE	0.00		
COMMUNICATIONS AND PRINTING		0.00	
CONSULTANTS AND CONTRACTS		0.00	
CONSULTANTS	0.00		
CONTRACTS	0.00		
OPERATIONS AND MAINTENANCE SUPPLIES		0.00	
		0.00	
STAFF DEVELOPMENT			0.00
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	37.61		
LEVEL 4	25.57		
LEVEL 5	15.33		
STUDENT AIDES	3.15		
CHILDREN AND COMMUNITY PEOPLE	1.15		
EQUIPMENT--CAPITALIZED		82.81	
CLASSROOM	0.00		
OFFICE	0.00		
SUPPLIES AND MATERIALS		0.00	
CLASSROOM	2.00		
OFFICE	1.50		
COMMUNICATIONS AND PRINTING		3.50	
FACILITY RENTAL		0.35	
TRAVEL		2.00	
IN TOWN, PROFESSIONALS	0.52		
OUT OF TOWN, PROFESSIONALS	2.66		
CONSULTANTS AND CONTRACTS		3.18	
CONSULTANTS	45.00		
CONTRACTS	25.80		
OPERATIONS AND MAINTENANCE SUPPLIES		70.80	
		0.00	

DAY CARE-STAFF TRAINING PARTICIPANTS

PERSONNEL	0.00		
EQUIPMENT AND MATERIALS	0.00		
FACILITY RENTAL	0.00		
OTHER	0.00		
	-----	0.00	
		-----	162.65

COMMUNITY ACTIVITIES

PERSONNEL ACQUISITION

LEVEL 1			
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
	0.00		
EQUIPMENT--CAPITALIZED	-----	0.00	
CLASSROOM			
OFFICE	0.00		
	0.00		
SUPPLIES AND MATERIALS	-----	0.00	
CLASSROOM			
OFFICE	0.00		
	0.00		
COMMUNICATIONS AND PRINTING	-----	0.00	
CONSULTANTS AND CONTRACTS	-----	0.00	
CONSULTANTS			
CONTRACTS	0.00		
	0.00		
OPERATIONS AND MAINTENANCE SUPPLIES	-----	0.00	
	-----	0.00	
TOTAL INVESTMENT		-----	0.00
			----- 245.26

COST CATEGORIES	DOLLARS IN THOUSANDS		
ANNUAL OPERATING			
GENERAL ADMINISTRATION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	50.80		
LEVEL 4	0.00		
LEVEL 5	11.72		
ANNUAL PERSONNEL ACQUISITION	0.00		
	-----	62.52	
OFFICE EQUIPMENT			
CAPITALIZED	0.60		
NOT CAPITALIZED	3.00		
	-----	3.60	
OFFICE SUPPLIES AND MATERIALS	-----	0.80	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	1.50		
PRINTING AND REPRODUCTION	1.75		
FACILITY RENTAL	0.00		
	-----	3.25	
TRAVEL			
IN TOWN, PROFESSIONALS	0.18		
OUT OF TOWN, PROFESSIONALS	1.48		
	-----	1.66	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	40.00		
	-----	40.00	
OPERATIONS AND MAINTENANCE			
PERSONNEL	7.83		
SUPPLIES AND MATERIALS	7.83		
	-----	15.66	
		-----	127.49
STAGE 1 INSTRUCTION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	25.40		
LEVEL 4	17.60		
LEVEL 5	23.44		
ANNUAL PERSONNEL ACQUISITION	0.00		
STIPENDS (STUDENTS)	4.05		
	-----	70.49	
EQUIPMENT -- CAPITALIZED			
CLASSROOM	4.63		
OFFICE	0.04		
	-----	4.66	
EQUIPMENT--NOT CAPITALIZED			

CLASSROOM	1.25		
OFFICE	0.05		
	-----	1.30	
SUPPLIES AND MATERIALS			
CLASSROOM	35.03		
OFFICE	0.30		
	-----	35.33	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	0.75		
PRINTING AND REPRODUCTION	0.75		
FACILITY RENTAL	0.00		
	-----	1.50	
TRAVEL			
IN TOWN, PROFESSIONALS	0.04		
IN TOWN, STUDENTS	0.31		
OUT OF TOWN, PROFESSIONALS	0.59		
	-----	0.94	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	2.31		
CONTRACTS	8.50		
	-----	10.81	
OPERATIONS AND MAINTENANCE			
PERSONNEL	8.47		
SUPPLIES AND MATERIALS	8.47		
	-----	16.94	
LUNCH PROGRAM			
	-----	21.88	
		-----	163.85
STAGE 2 INSTRUCTION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	38.10		
LEVEL 4	26.40		
LEVEL 5	23.44		
ANNUAL PERSONNEL ACQUISITION	0.00		
STIPENDS (STUDENTS)	2.70		
	-----	90.64	
EQUIPMENT--CAPITALIZED			
CLASSROOM	5.25		
OFFICE	0.04		
	-----	5.29	
EQUIPMENT--NOT CAPITALIZED			
CLASSROOM	1.00		
OFFICE	0.05		
	-----	1.05	
SUPPLIES AND MATERIALS			
CLASSROOM	41.47		
OFFICE	0.30		
	-----	41.77	
COMMUNICATIONS, PRINTING, FACILITIES			

COMMUNICATIONS	0.75		
PRINTING AND REPRODUCTION	0.75		
FACILITY RENTAL	0.00		
	-----	1.50	
TRAVEL			
IN TOWN, PROFESSIONALS	0.06		
IN TOWN, STUDENTS	0.35		
OUT OF TOWN, PROFESSIONALS	0.89		
	-----	1.30	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	2.31		
CONTRACTS	5.50		
	-----	7.81	
OPERATIONS AND MAINTENANCE			
PERSONNEL	10.27		
SUPPLIES AND MATERIALS	10.27		
	-----	20.53	
LUNCH PROGRAM			
	-----	29.38	
		-----	199.26
STAGE 3-4 INSTRUCTION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	50.80		
LEVEL 4	35.20		
LEVEL 5	23.44		
ANNUAL PERSONNEL ACQUISITION	0.00		
STIPENDS (STUDENTS)	2.70		
	-----	112.14	
EQUIPMENT--CAPITALIZED			
CLASSROOM	5.23		
OFFICE	0.04		
	-----	5.27	
EQUIPMENT--NOT CAPITALIZED			
CLASSROOM	1.00		
OFFICE	0.05		
	-----	1.05	
SUPPLIES AND MATERIALS			
CLASSROOM	47.91		
OFFICE	0.30		
	-----	48.21	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	0.75		
PRINTING AND REPRODUCTION	0.75		
FACILITY RENTAL	0.00		
	-----	1.50	
TRAVEL			
IN TOWN, PROFESSIONALS	0.08		
IN TOWN, STUDENTS	1.16		
OUT OF TOWN, PROFESSIONALS	1.18		

CONSULTANTS AND CONTRACTS		2.42	
CONSULTANTS	2.31		
CONTRACTS	6.00		
OPERATIONS AND MAINTENANCE		8.31	
PERSONNEL	12.33		
SUPPLIES AND MATERIALS	12.33		
LUNCH PROGRAM		24.67	
		36.25	
STAGE 5 INSTRUCTION			239.82
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
ANNUAL PERSONNEL ACQUISITION	0.00		
EQUIPMENT--CAPITALIZED		0.00	
CLASSROOM	0.00		
OFFICE	0.00		
EQUIPMENT--NOT CAPITALIZED		0.00	
CLASSROOM	0.00		
OFFICE	0.00		
SUPPLIES AND MATERIALS		0.00	
CLASSROOM	0.00		
OFFICE	0.00		
COMMUNICATIONS, PRINTING, FACILITIES		0.00	
COMMUNICATIONS	0.00		
PRINTING AND REPRODUCTION	0.00		
FACILITY RENTAL	0.00		
TRAVEL		0.00	
IN TOWN, PROFESSIONALS	0.00		
IN TOWN, STUDENTS	0.00		
OUT OF TOWN, PROFESSIONALS	0.00		
CONSULTANTS AND CONTRACTS		0.00	
CONSULTANTS	0.00		
CONTRACTS	0.00		
OPERATIONS AND MAINTENANCE		0.00	
PERSONNEL	0.00		
SUPPLIES AND MATERIALS	0.00		
		0.00	

LUNCH PROGRAM			
	---	0.00	
		---	0.00
STAGE 6 INSTRUCTION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		
ANNUAL PERSONNEL ACQUISITION	0.00		
	---	0.00	
EQUIPMENT--CAPITALIZED			
CLASSROOM	0.00		
OFFICE	0.00		
	---	0.00	
EQUIPMENT--NOT CAPITALIZED			
CLASSROOM	0.00		
OFFICE	0.00		
	---	0.00	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	---	0.00	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	0.00		
PRINTING AND REPRODUCTION	0.00		
FACILITY RENTAL	0.00		
	---	0.00	
TRAVEL			
IN TOWN, PROFESSIONALS	0.00		
IN TOWN, STUDENTS	0.00		
OUT OF TOWN, PROFESSIONALS	0.00		
	---	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	0.00		
	---	0.00	
OPERATIONS AND MAINTENANCE			
PERSONNEL	0.00		
SUPPLIES AND MATERIALS	0.00		
	---	0.00	
LUNCH PROGRAM			
	---	0.00	
		---	0.00
STAGE 7 INSTRUCTION			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	0.00		
LEVEL 4	0.00		
LEVEL 5	0.00		

ANNUAL PERSONNEL ACQUISITION	0.00		
EQUIPMENT--CAPITALIZED	-----	0.00	
CLASSROOM	0.00		
OFFICE	0.00		
EQUIPMENT--NOT CAPITALIZED	-----	0.00	
CLASSROOM	0.00		
OFFICE	0.00		
SUPPLIES AND MATERIALS	-----	0.00	
CLASSROOM	0.00		
OFFICE	0.00		
COMMUNICATIONS, PRINTING, FACILITIES	-----	0.00	
COMMUNICATIONS	0.00		
PRINTING AND REPRODUCTION	0.00		
FACILITY RENTAL	0.00		
TRAVEL	-----	0.00	
IN TOWN, PROFESSIONALS	0.00		
IN TOWN, STUDENTS	0.00		
OUT OF TOWN, PROFESSIONALS	0.00		
CONSULTANTS AND CONTRACTS	-----	0.00	
CONSULTANTS	0.00		
CONTRACTS	0.00		
OPERATIONS AND MAINTENANCE	-----	0.00	
PERSONNEL	0.00		
SUPPLIES AND MATERIALS	0.00		
LUNCH PROGRAM	-----	0.00	
	-----	0.00	
		-----	0.00
STAFF DEVELOPMENT			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	12.70		
LEVEL 4	0.00		
LEVEL 5	0.00		
SUBSTITUTES	8.80		
ANNUAL PERSONNEL ACQUISITION	0.00		
PRE-SERVICE TRAINING--NEW PERSONNEL	0.00		
EQUIPMENT--CAPITALIZED	-----	21.50	
CLASSROOM	0.00		
OFFICE	0.00		
EQUIPMENT--NOT CAPITALIZED	-----	0.00	

CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
SUPPLIES AND MATERIALS			
CLASSROOM	0.00		
OFFICE	0.00		
	-----	0.00	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	0.00		
PRINTING AND REPRODUCTION	0.00		
FACILITY RENTAL	0.00		
	-----	0.00	
TRAVEL			
IN TOWN, PROFESSIONALS	0.00		
OUT OF TOWN, PROFESSIONALS	0.00		
	-----	0.00	
CONSULTANTS AND CONTRACTS			
CONSULTANTS	0.00		
CONTRACTS	7.00		
	-----	7.00	
OPERATIONS AND MAINTENANCE			
PERSONNEL	2.00		
SUPPLIES AND MATERIALS	2.00		
	-----	3.99	
		-----	32.49
COMMUNITY ACTIVITIES			
PERSONNEL			
LEVEL 1	0.00		
LEVEL 2	0.00		
LEVEL 3	16.06		
LEVEL 4	17.90		
LEVEL 5	82.86		
ANNUAL PERSONNEL ACQUISITION	0.00		
STIPENDS (STUDENTS)	18.00		
	-----	134.82	
EQUIPMENT--CAPITALIZED			
CLASSROOM	0.00		
OFFICE	1.50		
	-----	1.50	
EQUIPMENT--NOT CAPITALIZED			
CLASSROOM	0.00		
OFFICE	7.50		
	-----	7.50	
SUPPLIES AND MATERIALS			
CLASSROOM	3.25		
OFFICE	3.00		
	-----	6.25	
COMMUNICATIONS, PRINTING, FACILITIES			
COMMUNICATIONS	0.75		
PRINTING AND REPRODUCTION	5.00		
FACILITY RENTAL	0.00		

TRAVEL			5.75
IN TOWN, PROFESSIONALS	2.59		
IN TOWN, STUDENTS	0.00		
OUT OF TOWN, PROFESSIONALS	10.36		
CONSULTANTS AND CONTRACTS			12.95
CONSULTANTS	13.50		
CONTRACTS	50.00		
OPERATIONS AND MAINTENANCE			63.50
PERSONNEL	15.00		
SUPPLIES AND MATERIALS	15.00		
		30.00	
FOOD		0.00	
		262.27	
TOTAL ANNUAL OPERATING			1025.17
TOTAL RESEARCH AND DEVELOPMENT, INITIAL INVESTMENT, ANNUAL OPERATING			1270.43

YEARS OF OPERATION

SENSITIVITY PARAMETERS 1

	SELECTED DATA VALUES
INVESTMENT	245.26
PERSONNEL ACQUISITION	0.00
PERSONNEL (STAFF TRAINING)	82.81
CLASSROOM EQUIPMENT--CAPITALIZED	75.56
OFFICE EQUIPMENT--CAPITALIZED	7.05
CLASSROOM SUPPLIES + MATERIALS	2.00
OFFICE SUPPLIES + MATERIALS	1.50
COMMUNICATIONS + PRINTING	0.35
FACILITY RENTAL (STAFF TRAINING)	2.00
IN-TOWN TRAVEL, PROFESSIONALS	0.52
OUT-OF-TOWN TRAVEL,PROFESSIONALS	2.66
CONSULTANTS	45.00
CONTRACTS	25.80
OPERATIONS + MAINTENANCE SUPPLIES	0.00
ANNUAL OPERATING	1025.17
PERSONNEL(LESS PERS.ACQUISITION)	492.11
PERSONNEL ACQUISITION	0.00
STIPENDS (STUDENTS)	
CLASSROOM EQUIPMENT--CAPITALIZED	15.11
OFFICE EQUIPMENT--CAPITALIZED	2.21
CLASSROOM EQUIPMENT-NOT CAPITAL.	3.25
OFFICE EQUIPMENT--NOT CAPITALIZED	10.65
CLASSROOM SUPPLIES + MATERIALS	127.65
OFFICE SUPPLIES + MATERIALS	4.70
COMMUNICATIONS + PRINTING	13.50
FACILITY RENTAL	0.00
IN-TOWN TRAVEL, PROFESSIONALS	2.95
IN-TOWN TRAVEL, STUDENTS	1.82
OUT-OF-TOWN TRAVEL, PROFESSIONALS	14.50
CONSULTANTS	20.44
CONTRACTS	117.00
OPERATIONS + MAINTENANCE	111.78
LUNCH PROGRAM	67.50
FOOD (COMMUNITY ACTIVITIES)	0.00
TOTAL NUMBER OF STUDENTS	700.00
STAGE 1	175.00
STAGE 2	235.00
STAGE 3-4	290.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
TOTAL NUMBER OF STAFF(LESS DAY CARE)	63.00
BY LEVEL	
LEVEL 1	0.00
LEVEL 2	0.00
LEVEL 3	17.00
LEVEL 4	16.00
LEVEL 5	30.00
BY ACTIVITY	
GENERAL ADMINISTRATION	6.00
STAGE 1	8.00

STAGE 2	10.00
STAGE 3-4	12.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STAFF TRAINING	1.00
COMMUNITY ACTIVITIES	26.00
TOTAL NO. OF PROFESS.(LESS DAY CARE)	33.00
GENERAL ADMINISTRATION	4.00
STAGE 1	4.00
STAGE 2	6.00
STAGE 3-4	8.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STAFF TRAINING	1.00
COMMUNITY ACTIVITIES	10.00
STAFF RECEIVING ANNUAL STAFF TRAIN.	0.00
LEVEL 1	0.00
LEVEL 2	0.00
LEVEL 3	0.00
LEVEL 4	0.00
LEVEL 5	0.00
STUDENT-TOTAL STAFF(-COM)-ST)RATIO	19.44
STUDENT TO STAFF RATIOS BY STAGES	
AVERAGE FOR ALL STAGES	23.33
STAGE 1	21.88
STAGE 2	23.50
STAGE 3-4	24.17
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STUDENT-TOTAL PROF.(-COM)-ST)RATIO	31.82
STUDENT-PROF.STAFF RATIOS BY STAGE	
AVERAGE FOR ALL STAGES	38.89
STAGE 1	43.75
STAGE 2	39.17
STAGE 3-4	36.25
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
TOTAL INVEST.(LESS COMM)/STUDENT	350.00
INVESTMENT COST BY STAGE PER STUDENT	
AVERAGE FOR ALL STAGES	109.00
STAGE 1	134.00
STAGE 2	113.00
STAGE 3-4	91.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
CLASS.EQP.+SUPP.INVEST.BY STAGE/STUD	
AVERAGE FOR ALL STAGES	107.00

STAGE 1	132.00
STAGE 2	111.00
STAGE 3-4	90.00
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
STF TRN. INVEST. PER STAFF PER.TRNED	0.00
TOT.OPERATING COST(-LUNCH)-COMM)	675.41
TOT.OP.COST(-LUNCH)-COMM)/STUDENT	964.87
OP. COST(-LUNCH)BY STAGE/STUDENT	
AVERAGE FOR ALL STAGES	736.33
STAGE 1	811.27
STAGE 2	722.92
STAGE 3-4	701.97
STAGE 5	0.00
STAGE 6	0.00
STAGE 7	0.00
ANN.CLASS.EQUIP.+SUPPL./STUDENT	
AVERAGE FOR ALL STAGES	203.95
STAGE 1	233.74
STAGE 2	203.05
STAGE 3-4	186.70
STAGE 5	
STAGE 6	
STAGE 7	
AN.STF.TRNING COST/STF.PER.TRNED.	

APPENDIX B

	I. INPUTS SAME FOR ALL ACTIVITIES
	A. Personnel Salaries and Wages
L1AS	Level 1 average annual salary
L2AS	Level 2 average annual salary
L3AS	Level 3 average annual salary
L4AS	Level 4 average annual salary
L5AS	Level 5 average annual salary
L4HW	Hourly wage per Level 4 trainee in initial staff training
L5HW	Hourly wage per Level 5 trainee in initial staff training
SDW	Daily wages per substitute
	B. Personnel Acquisition Costs
ACL1	Recruitment cost per person in Level 1
ACL2	Recruitment cost per person in Level 2
ACL3	Recruitment cost per person in Level 3
ACL4	Recruitment cost per person in Level 4
ACL5	Recruitment cost per person in Level 5
	C. Personnel Turnover Rates
L1TR	Annual turnover rate for Level 1
L2TR	Annual turnover rate for Level 2
L3TR	Annual turnover rate for Level 3
L4TR	Annual turnover rate for Level 4
L5TR	Annual turnover rate for Level 5
	D. Personnel Travel
PITTC	Cost per mile per professional (trainee and trainer in staff training) per in-town trip
SITTC	Cost per student per in-town trip
PØTTC	Cost per professional (trainee and trainer in staff training) per out-of-town trip
PØTTD	Number of days per out-of-town trip per professional (trainee and trainer in-staff training
PØTTDC	Per diem cost per professional (trainee and trainer)

	E. Equipment
ØERCF	Office equipment annual replacement consumption factor
CERCF	Classroom equipment annual replacement consumption factor
	F. Communications
ACØ	Annual communications cost per office
	G. Consultants
CDC	Cost per day per consultant
CTC	Cost per trip per consultant
CTD	Number of days per trip per consultant
CTDC	Per diem cost per consultant for trips
	H. Operations and Maintenance
ØMPF	Operations and maintenance personnel cost factor
ØMSF	Operations and maintenance supplies and materials cost factor
	I. Lunch Program
ALCS	Annual cost for lunches per student in lunch program
	II. GENERAL ADMINISTRATION
	A. Inputs for Both Investment and Annual Operating
	1. Number of People
GL1	Number of personnel Level 1 in general administration
GL2	Number of personnel Level 2 in general administration
GL3	Number of personnel Level 3 in general administration
GL4A	Number of personnel Level 4A (professional)
GL4B	Number of personnel Level 4B (non-professional)
GL5	Number of personnel Level 5 in general administration
GS4	Number of offices Level 4B in general administration

	B. Investment Inputs
	1. Office Equipment--Capitalized
GIFØEC	General administration initial fixed cost for office equipment, capitalized
GIØES4	General administration initial office equipment cost per office
	2. Office Supplies and Materials
GIFØSM	General administration initial fixed cost of office supplies and material
GIØSS4	General administration initial office supplies and materials cost per office
	3. Communications and Printing
GICP	General administration initial cost of communications and printing
	4. Consultants
GCI	Number of consultants in investment phase in general administration
GCID	Number of days per consultant in investment phase in general administration
GITC	Number of initial trips per consultant in general administration
	5. Contracts
GCØNI	Cost of contracts in investment phase in general administration
	6. Maintenance Supplies
GIØMS	General administration initial cost for maintenance supplies

	C. Annual Operating Inputs
	1. Number of Offices
GØ	Number of offices in general administration
	2. Office Equipment--Not Capitalized
GAØES4	General administration annual office equipment (not capitalized) cost per office
	3. Office Supplies and Materials
GAØSS4	General administration annual office supplies and materials cost per office
	4. Printing, Reproduction, Facility Rental
GAPR	General administration annual cost of printing and reproduction
GFR	General administration annual facility rental
	5. Travel
GPAITF	Proportion of professionals in general administration taking annual in-town trips
GPAIT	Annual in-town miles per professional in general administration
GPAØTF	Proportion of professionals in general administration taking annual out-of-town trips
GPAØT	Number of annual out-of-town trips per professional taking such trips in general administration
	6. Consultants
GCA	Number of consultants annually in general administration
GCAD	Number of days per consultant annually in general administration
GATC	Number of annual trips per consultant in general administration

	7. Contracts
GCØNA	Cost of contracts annually in general administration
	III. STAGE 1 INSTRUCTION
	A. Inputs for Both Investment and Annual Operating
	1. Number of People
S1S	Number of students in Stage 1
S1L1	Number of personnel Level 1 in Stage 1
S1L2	Number of personnel Level 2 in Stage 1
S1L3	Number of personnel Level 3 in Stage 1
S1L4A	Number of personnel Level 4A (Professional)
S1L4B	Number of personnel Level 4B (Non-Professional)
S1L5	Number of personnel Level 5
S1Ø	Number of offices
	B. Investment Inputs
	1. Equipment--Capitalized
S1IFCC	Stage 1 initial fixed cost for classroom equipment, capitalized
S1ICCS	Stage 1 initial cost per student in Stage 1 for classroom equipment, capitalized
S1IFØC	Stage 1 initial fixed cost for office equipment, capitalized
S1IØS4	Stage 1 initial office equipment cost per office
	2. Supplies and Materials
S1IFCS	Stage 1 initial fixed cost for classroom supplies and materials
S1ICSS	Stage 1 initial cost per student in Stage 1 for classroom supplies and materials
S1IFØS	Stage 1 initial fixed cost of office supplies and materials
S1IØSS	Stage 1 initial office supplies and materials cost per office

	3. Communications and Printing
S1ICP	Stage 1 initial cost of communications and printing
	4. Consultants
S1CI	Number of consultants in investment phase in Stage 1
S1CID	Number of days per consultant in investment phase in Stage 1
S1ITC	Number of initial trips per consultant in Stage 1
	5. Contracts
S1CØNI	Cost of contracts in investment phase in Stage 1
	6. Maintenance Supplies
S1IØMS	Stage 1 initial cost of maintenance supplies
	C. Annual Operating Inputs
	1. Number of Offices
S1Ø	Number of offices in Stage 1
	2. Equipment--Not Capitalized
S1AFC	Stage 1 annual fixed cost for classroom equipment, not capitalized
S1ACS	Stage 1 annual cost per student in Stage 1 for classroom equipment, not capitalized
S1AØS4	Stage 1 annual office equipment cost, not capitalized, per office
	3. Supplies and Materials
S1AFCS	Stage 1 annual fixed cost for classroom supplies
S1ACSS	Stage 1 annual cost per student in Stage 1 for classroom supplies and materials
S1AØSS	Stage 1 annual cost per office, for office supplies and materials

	4. Printing, Reproduction, Facility Rental
S1APR	Stage 1 annual cost of printing and reproduction
S1FR	Stage 1 annual cost of facility rental
	5. Travel
S1PITF	Proportion of professionals in Stage 1 taking annual in-town trips
S1PAIT	Annual in-town miles per professional in Stage 1
S1SITF	Proportion of students in Stage 1 taking annual in-town trips
S1SAIT	Cost per trip per child
S1PØTF	Proportion of professionals in Stage 1 taking annual out-of-town trips
S1PAØT	Number of annual out-of-town trips per professional taking such trips in Stage 1
	6. Consultants
S1CA	Number of consultants annually in Stage 1
S1CAD	Number of days per consultant annually in Stage 1
S1ATC	Number of annual trips per consultant in Stage 1
	7. Contracts
S1CØNA	Cost of contracts annually in Stage 1
	8. Lunch Program
S1SLF	Proportion of students in Stage 1 in lunch program

	IX. STAFF TRAINING
	A. Inputs for Both Investment and Annual Operation
	1. Number of People
STL1	Number of Level 1 personnel in staff training acting as trainers full time
STL2	Number of Level 2 personnel in staff training acting as trainers full time
STL3	Number of Level 3 personnel in staff training acting as trainers
STL4A	Number of Level 4A (professionals)
STL4B	Number of Level 4B (nonprofessionals)
STL5	Number of Level 5 personnel in staff training acting as trainers full time
	B. Investment Inputs
	1. Initial Training or Community People, Students, and Children
STSA	Number of student aide trainees in initial staff training
STIC	Number of children involved in initial staff training
STICW	Number of community people involved in initial staff training
	2. Period of Initial Training
STIWKS	Length (in weeks) of staff training in investment phase
STWL1T	Number of weeks per Level 1 trainer
STWL2T	Number of weeks per Level 2 trainer
STWL3T	Number of weeks per Level 3 trainer
STWL4T	Number of weeks per Level 4 trainer
STWL5T	Number of weeks per Level 5 trainer
STIWL1	Number of weeks of initial staff training per Level 1 trainee
STIWL2	Number of weeks of initial staff training per Level 2 trainee
STIWL3	Number of weeks of initial staff training per Level 3 trainee

STIWL4	Total number of hours of initial staff training per Level 4 trainee
STIWL5	Total number of hours of initial staff training per Level 5 trainee
STSAH	Total number of hours of training per student aide trainee in initial staff training
STWC	Number of weeks in initial staff training per child
ST1HWC	Hours per week per child in initial staff training
STIDCP	Number of days in initial staff training per community person
	3. Cost of Initial Training for Community People, Students, and Children
STSAHR	Hourly wage rate per student aide trainee in initial staff training
STIRHC	Wage rate (per hour) per child in initial staff training
STIRCP	Wage rate per day per community person in initial staff training
	4. Proportion of Personnel Receiving Initial Training
STIFL1	Proportion of Level 1 personnel who do receive initial staff training
STIFL2	Proportion of Level 2 personnel who do receive initial staff training
STIFL3	Proportion of Level 3 personnel who do receive initial staff training
STIFL4	Proportion of Level 4 personnel who do receive initial staff training
STIFL5	Proportion of Level 5 personnel who do receive initial staff training
	5. Equipment--Capitalized
STIFCC	Staff training initial fixed cost for classroom equipment, capitalized
STICCT	Staff training initial cost per trainee for classroom equipment, capitalized
STIFØC	Staff training initial fixed cost for office equipment, capitalized
STIØS4	Staff training initial office equipment cost per secretary, not capitalized

	6. Supplies and Materials
STIFCS	Staff training initial fixed cost for classroom supplies and materials
STICST	Staff training initial cost per trainee for classroom supplies and materials (including student aides)
STIFØS	Staff training initial fixed cost of office supplies and materials
STIØSS	Staff training initial office supplies and materials cost per secretary
	7. Communications, Printing, and Facility Rental
STICP	Staff training initial cost of communications and printing
STFRWK	Staff training weekly rental cost of facilities in investment phase
	8. Travel
STIITF	Proportion of trainers in staff training taking initial in-town trips
STIITT	Initial in-town miles per trainer in staff training
STIØTF	Proportion of trainees and trainers in staff training taking initial out-of-town trips
STIØTT	Number of initial out-of-town trips per trainee and trainer taking such trips in staff training
STITFT	Proportion of trainees (less student aides) taking initial in-town trips
STIIT	Initial in-town trips per trainee (less student aides)
STITFS	Total cost of in-town trips for student aide trainees
	9. Consultants
STCI	Number of consultants in initial staff training
STCID	Number of days per consultant in staff training
STITC	Number of initial trips per consultant
	10. Contracts
STCØNI	Cost of contracts in investment phase in staff training

	E. Facility Rental
STDCRW	Weekly facility rental for initial staff training day day care
	F. Other
STDCFØ	Initial staff training day care fixed cost for miscellaneous
STDCOW	Day care cost per week per child miscellaneous (i.e., refreshments)
	G. Annual Operating Training
	1. Period of Annual Training
STADL1	Number of days of staff training annually per Level 1 trainee
STADL2	Number of days of staff training annually per Level 2 trainee
STADL3	Number of days of staff training annually per Level 3 trainee
STADL4	Number of days of staff training annually per Level 4 trainee
STADL5	Number of days of staff training annually per Level 5 trainee
	2. Proportion of Personnel Receiving Annual Training
STAFL1	Proportion of Level 1 personnel who do receive annual staff training
STAFL2	Proportion of Level 2 personnel who do receive annual staff training
STAFL3	Proportion of Level 3 personnel who do receive annual staff training
STAFL4	Proportion of Level 4 personnel who do receive annual staff training
STAFL5	Proportion of Level 5 personnel who do receive annual staff training

	3. Number of Offices
STØ	Number of offices in staff training
	4. Equipment--Not Capitalized
STAFC	Staff training annual fixed cost for classroom equipment, not capitalized
STACT	Staff training annual cost per trainee for classroom equipment, not capitalized
STAØS4	Staff training annual office equipment cost per office, not capitalized
	5. Supplies and Materials
STACST	Staff training annual cost per trainee for classroom supplies and materials
STAØST	Staff training annual cost per office for office supplies and materials
	6. Printing, Reproduction, and Facility Rental
STAPR	Staff training annual cost of printing and reproduction
STAFR	Staff training annual cost of facility rental
	7. Travel
STAITF	Proportion of trainees and trainers in staff training taking annual in-town trips
STAITT	Number of annual in-town trips per trainee and trainer taking such trips in staff training
STAØTF	Proportion of trainees and trainers in staff training taking annual out-of-town trips
STAØTT	Number of annual out-of-town trips per trainee and trainer taking such trips in staff training
	8. Consultants
STCA	Number of consultants annually in staff training
STCAD	Number of days per consultant annually in staff training
STATC	Number of annual trips per consultant in staff training

	9. Contracts
STCØNA	Cost of contracts annually in staff training
	10. Maintenance Supplies
STIØMS	Staff training initial cost of maintenance supplies

X. COMMUNITY ACTIVITIES

A. Inputs for Both Investment and Annual Operating

1. Number of People

CS	Number of students in community activities
CL1	Number of personnel Level 1 in community activities
CL2	Number of personnel Level 2 in community activities
CL3	Number of personnel Level 3 in community activities
CL4A	Number of personnel Level 4A (Professionals)
CL4B	Number of personnel Level 4B (Non-professionals)
CL5	Number of personnel Level 5 in community activities
CS4	Number of secretaries, Level 4B, in community activities

B. Investment Inputs

1. Equipment--Capitalized

CIFCC	Community activities initial fixed cost for classroom equipment, capitalized
CICCS	Community activities initial cost per student in community activity for classroom equipment, capitalized
CIFØC	Community activities fixed cost for office equipment, capitalized
CIØS4	Community activities initial office equipment cost per secretary, Level 4B

2. Supplies and Materials

CIFCS	Community activities initial fixed cost for classroom supplies and materials
CICSS	Community activities cost per student in community activities for classroom supplies and materials
CIFØS	Community activities initial fixed cost of office supplies and materials
CIØSS	Community activities initial office supplies and materials cost per secretary, Level 4B

	3. Communications and Printing
CICP	Community activities initial cost of communications and printing
	4. Consultants
CCI	Number of consultants in investment phase in community activities
CCID	Number of days per consultant in investment phase in community activities
CITC	Number of initial trips per consultant in community activities
	5. Contracts
CCØNI	Cost of contracts in investment phase in community activities
	6. Maintenance Supplies
CIØMS	Community activities initial cost of maintenance supplies
	C. Annual Operating Inputs
	1. Number of Offices
CØ	Number of offices in community activities
	2. Equipment--Not Capitalized
CAFC	Community activities annual fixed cost for classroom equipment
CACS	Community activities annual cost per student in community activities for classroom equipment, not capitalized
CAØS4	Community activities annual office equipment cost, capitalized and not capitalized, per office

	3. Supplies and Materials
CACSS	Community activities annual cost per student in community activities for classroom supplies and materials
CAØSS4	Community activities annual cost per office, for office supplies and materials
	4. Printing, Reproduction, Facility Rental
CAPR	Community activities annual cost of printing and reproduction
CFR	Community activities annual cost of facility rental
	5. Travel
CPAITF	Proportion of professionals in community activities taking annual in-town trips
CPAIT	Annual in-town miles per professional in community activities
CSAITF	Proportion of students in community activities taking annual in-town trips
CSAIT	Annual in-town miles per student in community activities
CPAØTF	Proportion of professionals in community activities taking annual out-of-town trips
CPAØT	Number of annual out-of-town trips per professional taking such trips in community activity
	6. Consultants
CCA	Number of consultants annually in community activities
CCAD	Number of days per consultant annually in community activities
CATC	Number of annual trips per consultant in community activities
	7. Contracts
CCØNA	Cost of contracts annually in community activities
	8. Food
CFØØD	Community activities annual cost of food

TIME SHARING

The model is programmed in a time-sharing mode on a Burroughs 5500 Computer. However, it can readily be converted to batch mode for use in a center computer. Time sharing is a relatively inexpensive way of obtaining computer services without bying a computer. The model is run on a teletype terminal attached to a central computer by a telephone line. The cost model user obtains selected costs results immediately at the terminal and a full model print out is delivered to him within a few hours.

APPENDIX C

INVESTMENT COSTS

Object Class	General Administration	Stage I [b]	Staff Development	Community Activities
Personnel Acquisition Level I Level II Level III Level IV Level V Stipends [a]	GL1 * ACL1 GL2 * ACL2 GL3 * ACL3 GL4 * ACL4 GL5 * ACL5	S1L1 * ACL1 S1L2 * ACL2 S1L3 * ACL3 S1L4 * ACL4 S1L5 * ACL5	STL1 * L1AS * (STWL1T/52.0) + (L1ST * STIFL1) * L1AS * (STIWL1/52.0) STL2 * L2AS * (STWL2T/52.0) + (L2ST * STIFL2) * L2AS * (STIWL2/52.0) STL3 * L3AS * (STWL3T/52.0) + (L3ST * STIFL3) * L3AS * (STIWL3/52.0) STL4 * L4AS * (STWL4T/52.0) + (L4ST * STIFL4) * L4IIW * STIIL4 STL5 * L5AS * (STWL5T/52.0) + (L5ST * STIFL5) * L5AS * (STIWL5/52.0) STSA * STSAII * STSAIIR STIC * STIIWC * STWC * STIRUIC + STICW * STIDCP * STIRCP	CL1 * ACL1 CL2 * ACL2 CL3 * ACL3 CL4 * ACL4 CL5 * ACL5
Office Equipment Capitalized Not Capitalized	GIFOEC + G10ES4 * GO	S11FOC + S11OS4 * S1O	STIFOC + STIOS4 * STO	CIFOC + CIOS4 * CO
Classroom Equipment Capitalized Not Capitalized		S11FCC + S11CCS * S1S	STIFCC + STICCT * STITT	CIFCC + CICCS * CS
Office Supplies and Materials	GIFOSM + G10SS4 * GO	S11FOS + S11OSS * S1O	STIFOS + STIOSS * STO	CIFOS + CIOSS * CO
Classroom Supplies and Materials		S11FCS + S11CSS * S1S	STIFCS + STICST * STITT	CIFCS + CICSS * CS
Communications and Facility Rental Communications Printing Facility Rental	GICP	S11CP	STICP STIWKS * STFRWK	CICP
Travel In Town, Professional Out of Town, Professional In Town, Students			(STP * STIITF) * STIITT * PITTC + (STIIT * STITFT) * STIIT * SITTC + STITFS {(STP + STITT) * STIOTF] * STIOTT} * {POTTC + POTTD * POTTDC}	
Consultants and Contracts Consultants Contracts	GCI * (GCID * CDC + GITC * CTC + GITC * CTD * CTDC) GCONI	S1C1 * (S1CID * CDC * S11TC * CTC + S11TC * CTC * CTDC) S1CONI	STCI * (STCID * CDC + STITC * CTC + STITC * CTD * CTDC) STCONI	CCI * (CCID * CDC + CITC * CTC + CITC * CTD * CTDC) CCONI
Operation and Maintenance Personnel Supplies and Materials	GIOMS	S1IOMS	STIOMS	CIOMS
Lunch Program				CFOOD
Total				

a. Includes student aides, children, and community people.

b. The cost equations for Stages II through VII are the same as those shown for Stage I.

ANNUAL OPERATING COSTS

Object Class	General Administration	Stage I[a]	Staff Development	Community Activities
Personnel Level I Level II Level III Level IV Level V	GL1 * L1AS * (SWIOY/52.0) GL2 * L2AS * (SWIOY/52.0) GL3 * L3AS * (SWIOY/52.0) GL4 * L4AS GL5 * L5AS * (SWIOY/52.0)	S1L1 * L1AS S1L2 * L2AS S1L3 * L3AS S1L4 * L4AS S1L5 * L5AS	STL1 * L1AS STL2 * L2AS STL3 * L3AS STL4 * L4AS STL5 * L5AS	CL1 * L1AS CL2 * L2AS CL3 * L3AS CL4 * L4AS CL5 * L5AS
Personnel Acquisition	(GL1 * L1TR) * ACL1 + (GL2 * L2TR) * ACL2 + (GL3 * L3TR) * ACL3 + (GL4 * L4TR) * ACL4 + (GL5 * L5TR) * ACL5	(S1L1 * L1TR) * ACL1 + (S1L2 * L2TR) * ACL2 + (S1L3 * L3TR) * ACL3 + (S1L4 * L4TR) * ACL4 + (S1L5 * L5TR) * ACL5	(STL1 * L1TR) * ACL1 + (STL2 * L2TR) * ACL2 + (STL3 * L3TR) * ACL3 + (STL4 * L4TR) * ACL4 + (STL5 * L5TR) * ACL5	(CL1 * L1TR) * ACL1 + (CL2 * L2TR) * ACL2 + (CL3 * L3TR) * ACL3 + (CL4 * L4TR) * ACL4 + (CL5 * L5TR) * ACL5
Stipends for Students				
Office Equipment Capitalized	Total investment for capitalized office equipment * OERCF	Total investment cost for capitalized office equipment for Stage I * OERCF S1AOS4 * SIO	Total investment cost for capitalized office equipment * OERCF	Total investment cost for capitalized office equipment for community activities * OERCF CAOS4 * CO
Not Capitalized	GAOES4 * GO		STAOS4 * STO	
Classroom Equipment Capitalized		Total investment cost for capitalized classroom equipment for Stage I * CERCF S1AFC + S1ACS * S1S	Total investment cost for capitalized classroom equipment * CERCF STAFC + STACT * STATT	Total investment cost for capitalized classroom equipment for community activities * CERCF CAFC + CACS * CS
Not Capitalized				
Office Supplies and Materials	GAOSS4 * GO	S1AOSS * S1O	STAOST * STO	CAOSS4 * CO
Classroom Supplies and Materials		S1ACSS * S1S + S1AFCS	STACST * STATT	CACSS * CS
Communications and Facility Rental Communications Printing Facility Rental	GAPR GFR	S1APR S1FR	STAPR STFR	CAPR CFR
Travel In Town, Professional Out of Town, Professional In Town, Students	(GP * GPAITF) * GPAIT * PITTC [(GP * GPAOTF) * GPAOT] * [POTTC + POTTD * POTTDC]	(S1P * S1PITF) * S1PAIT * PITTC [(S1P * S1POTF) * S1PAOT] * [POTTC + POTTD * POTTDC] (S1S * S1SITF) * S1SAIT * SITTC	[(STP + STATT) * STAITF] * STAITT * PITTC [(STP + STATT) * STAOTF] * STAOTT] * [POTTC + POTTD * POTTDC]	(CP * CPAITF) * CPAIT * PITTC [(CP * CPAOTF) * CPAOT] * [POTTC + POTTD * POTTDC] (CS * CPAITF) * CSAIT * SITTC
Consultants and Contracts Consultants Contracts	GCA * (GCAD * CDC + GATC * CTC + GATC * CTD * CTDC) GCONA	S1CA * (S1CAD * CDC + S1ATC * CTC + S1ATC * CTD * CTDC) S1CONA	STCA * (STCAD * CDC + STATC * CTC + STATC * CTD * CTDC) STCONA	CCA * (CCAD * CDC + CATC * CTC + CATC * CTD * CTDC) CCONA
Operations and Maintenance Personnel Supplies and Materials	7% of total activity cost minus lunch program cost 7% of total activity cost minus lunch program cost	7% of total activity cost minus lunch program cost 7% of total activity cost minus lunch program cost	7% of total cost activity minus lunch program cost 7% of total cost activity minus lunch program cost	7% of total cost activity minus lunch program cost 7% of total cost activity minus lunch program cost
Lunch Program		S1SLF * S1S * ACLS		
Total				

a. The cost equations for Stages II through VII are the same as those shown for Stage I.